

Rule 1.126  
12/2/04

## CLAIMS

32  
What is Claimed:

- <sup>1</sup>  
~~38~~. A method for taxonomic identification of a biological analyte comprising:
- (a) exposing the solution containing the analyte to a ligand specific for the analyte of interest that has been conjugated to a marker;
  - (b) separating the bound analyte from the excess marker-conjugated ligands;
  - (c) interrogation of the analyte for ligand binding via detection of the conjugated marker.
- <sup>2</sup>  
~~39~~. The method of claim ~~38~~<sup>1</sup>, wherein the biological analyte is selected from the group comprised of:
- (d) bacteria;
  - (e) viruses;
  - (f) proteinaceous toxin;
  - (g) rickettsiae;
  - (h) protozoa;
  - (i) fungi; and
  - (j) cytosolic protein.
- <sup>3</sup>  
~~40~~. The method of claim ~~38~~<sup>1</sup>, wherein the separation of the bound analyte from the excess conjugated ligand is accomplished by chromatography.
- <sup>4</sup>  
~~41~~. The method of claim ~~38~~<sup>1</sup>, wherein the ligand is conjugated to a magnetic particle and the separation of the bound analyte from the non-binding components of the analyte solution is accomplished by magnetic separation with the ligand being tethered to the magnetic particle by at least fifteen Å for capture of microorganisms.

- <sup>5</sup>  
~~42.~~ The method of claim <sup>1</sup>~~38~~, wherein the ligand is a heme compound.
- <sup>6</sup>  
~~43.~~ The method of claim <sup>1</sup>~~38~~, wherein the ligand is a siderophore.
- <sup>7</sup>  
~~44.~~ The method of claim <sup>1</sup>~~38~~, wherein the ligand is a polysaccharide.
- <sup>8</sup>  
~~45.~~ The method of claim <sup>1</sup>~~38~~, wherein the ligand is a peptide specific for an outer membrane protein.
- <sup>9</sup>  
~~46.~~ The method of claim <sup>1</sup>~~38~~, wherein the ligand is a peptide specific for a conjugated lipid.
- <sup>10</sup>  
~~47.~~ The method of claim <sup>1</sup>~~38~~, wherein the marker is fluorescent and the detection is via fluorescence.
- <sup>11</sup>  
~~48.~~ The method of claim <sup>1</sup>~~38~~, wherein the marker is luminescent and the detection is via luminescence.
- <sup>12</sup>  
~~49.~~ The method of claim <sup>1</sup>~~38~~, wherein the marker is radioactive and the detection is via radioactivity.
- <sup>13</sup>  
~~50.~~ The method of claim <sup>1</sup>~~38~~, wherein the marker is phosphorescent and the detection is via phosphorescence;